

REMARKS

In the Office Action dated September 16, 2005, claims 1-20 are pending and claims 1-20 are rejected. Reconsideration is requested for at least the following reasons.

The present invention describes and claims a sheet feeding apparatus comprising:

- a regulating unit provided so as to be slidable on the sheet container for regulating a set position of a sheet;
- a position detector for detecting a position of the regulating unit; and
- a contact detector for detecting a contact state between the uppermost layer of the sheets contained in the sheet container and the sheet conveying unit, wherein the elevation/lowering driving unit lowers the sheet container when a change in the position of the regulating unit is detected by the position detector in a state in which the uppermost layer of the sheets contacts the sheet conveying unit.

None of the cited prior art, taken alone or in combination, teach or suggest the presently claimed sheet feeding apparatus.

Claims 1-20 are rejected under 35 U.S.C. §103(a) over Hattori et al. ("Hattori"; U.S. 6,091,927) in view of Hirota et al. ("Hirota "; U.S. 6,585,258). The Examiner states that

Hattori et al. teaches when the elevation lowering unit 33 is driven, it raises the sheet container 7 in order to bring documents 5 into pressing contact with the sheet conveying unit 8. It is understood to mean that when a stack of media sheets of unknown height are raised and continued to be raised, until the top most media sheet initiates contact with the sheet conveying unit 8, at some point of reference the elevation lowering unit 33 stops driving the sheet container upwards, this is understood to be taken as a sensory input which dictates the stopping of the elevation lowering unit 33 from continuously raising the media sheets beyond the sheet conveyance unit 8 (Col. 5 line 8-15).

Applicants submit Hattori describes that, in the case where the documents 5 are expected to be rearranged (Yes, step S16)(col. 7, paragraph beginning at line 1), the bottom plate 7 is lowered. Hirota describes that the width of the documents is detected (by an unknown sensor) according to the position of guide plate 13 (col. 5, lines 32-33). It is not reasonable for one of

ordinary skill in the art to combine Hattori's technology - that in the case the documents are expected to be rearranged the bottom plate is lowered - and Hirota's technology - that the width of the documents is detected by the position of the guide plate - because Hirota does not suggest that the detection results of an operation of the document regulating plate can be used for lowering the document tray (a feature of certain embodiments of the presently claimed invention). Hirota teaches only that the detection results of the operation of the document regulating plate are used for the size detection of documents.

Hattori fails to teach or suggest "a contact detector for detecting a contact state between the uppermost layer of the sheets contained in the sheet container and the sheet conveying unit", as claimed herein.

In the present invention, a detector S2 is positioned to sense an upward motion of roller R1 for detecting a contact state between the uppermost layer of the sheets contained in the sheet container and the sheet conveying unit. No such detection device is suggested by Hattori.

The Examiner admits that "Hattori et al. does not disclose a regulating unit as to being disposed and positioned on the sheet container nor does he [*sic*] disclose a position detector for detecting the position of the regulating unit." Hirota is cited for a teaching

of a regulating unit 13 to be moveably mounted and the position of the regulating unit 13 to be verifiable by the disposed sensors S1 on the apparatus. The sensors are disposed to allowing a signal to the controller to be sent and the position of the regulating unit 13 can be determined. Hattori also teaches of using the sensors S1 to detect size dimensions of the sheet contained in the sheet container so that multiple size sheets can be used to feed into the apparatus (Col. 5, lines 29-36).

Applicants disagree that Hirota teaches or suggests that the position of the regulating unit 13 to be verifiable by the disposed sensors S1 on the apparatus. Hirota specifically states that

the document tray 2 is provided with two size detection sensors S1 for **detecting the length of the document in the feeding direction** (Col. 5, lines 34-36).
[Emphasis added.]

Further, both Hattori and Hirota *fail* to teach or suggest that
the elevation/lowering driving unit **lowers the sheet container when a change in the position of the regulating unit** is detected by the position detector in a state in which the uppermost layer of the sheets contacts the sheet conveying unit

as claimed herein.

The Examiner concludes that

[i]t would have been obvious to one of ordinary skill in the art at the time that the invention was made, to combine the teaching to Hattori et al. and Hirota et al. to modify the input received from the regulating unit as detected by the positioned sensors when the position of the regulating unit is altered to instruct the elevation lowering driving unit to lower the sheet container from initiating contact with the sheet conveyance unit.

Applicants strongly disagree. There is no suggestion either in Hattori or in Hirota that the elevation/lowering driving unit should be lowered when a change in the position of the regulating unit is detected. Thus, there is no suggestion in the combination of Hattori and Hirota that the elevation/lowering driving unit should be lowered when a change in the position of the regulating unit is detected. Thus, it is not seen how this would have been obvious to one of ordinary skill in the art in view of any combination of Hattori and Hirota.

Regarding claims 2, 7, 12 and 17, because both Hattori and Hirota *fail* to teach or suggest that

the elevation/lowering driving unit **lowers the sheet container when a change in the position of the regulating unit** is detected by the position detector in a state in which the uppermost layer of the sheets contacts the sheet conveying unit,

it is not seen how it would have been obvious to one of ordinary skill in the art to make the elevation/lowering driving unit lower the sheet container until the uppermost layer of the sheets

and the sheet conveying unit are separated when the position detector detects a change in the position of the regulating unit, as claimed herein.

Regarding claims 3, 8, 13 and 18, for at least the same reasons as discussed above, it is not seen how it would have been obvious to one of ordinary skill in the art to make a sheet feeding apparatus comprising: a receiving unit for receiving information according to a lowered amount of the sheet container; and a storage for storing the received information, wherein the elevation/lowering driving unit lowers the sheet container by the lowered amount stored in the storage when the position detector detects a change in the position of the regulating unit, as claimed herein.

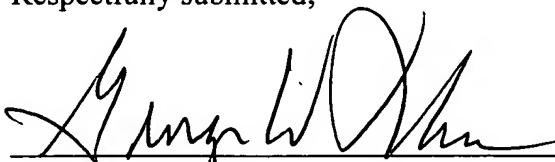
Regarding claims 5, 10, 15 and 20, neither Hattori nor Hirota teach or suggest a sheet feeding apparatus comprising a clocking unit, wherein the elevation/lowering driving unit elevates the sheet container when a change in the position of the regulating unit is not detected for a predetermined time, as claimed herein.

Thus, it is not seen how the presently claimed invention would have been obvious to one of ordinary skill in the art in view of any combination of Hattori and Hirota.

An early examination and notice of allowance are earnestly solicited.

Respectfully submitted,

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